

# The Educational Inclusion of School Children with a Diagnosis of Autism Spectrum Disorder, Current Situation, Reflections and Challenges in Cuba

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**Abstract:** Educational inclusion requires the improvement of the work carried out by teachers, specialists and families in order to meet the needs of children, adolescents and young people with Autism Spectrum Disorder (ASD). The comprehensive education given to these students with ASD based on the inclusive policies that are being developed is a great challenge, and when considering the high expectations of an educated population like Cuba's. The purpose of this paper is to review the pedagogical work structured on a set of principles for ASD students. For this purpose, the application and continuous use of interaction techniques that are put into practice in daily life favor learning, socialization, adaptation of their behaviors, social interrelations, and knowledge of the environment of the children with ASD. The intensity and long duration of the interventions, the cooperative intervention, precocity, the ecological principle, priority to communication and socialization, the multisensory principle, and the use of alternative facilitating systems and individualization during intervention can become guidelines for the pedagogical work the ASD learners.

**Keywords:** Educational, inclusion, autism, pedagogical work, principles, intervention.

## INTRODUCTION

Educational inclusion on a global scale implies substantial changes in cultures, mentalities, policies, educational offers and practices; it implies the recognition of the right of all to quality education, regardless of the particularities and characteristics that condition the variability in development.

The presence of autism, specialists and the support of families in the areas of educational inclusion of persons with certain disabilities is becoming more and more decisive in regular and special schools and other spheres of action, guaranteeing, without doubt, the quality of comprehensive education of children, adolescents and young people, who, with the necessary educational influence, can develop with better possibilities and have a fuller psychological and emotional life in interaction with their peers.

A "silent epidemic" (Infante, 2017) is spreading rapidly throughout the world. There are no exclusionary conditions that free any family from the threat of having

one of its youngest members diagnosed with Autism Spectrum Disorder (ASD).

While multiple professionals and institutions in the world work and research to find an answer about its etiology, treatment and prevention, more questions arise; the search for answers that receive scientific consensus unites efforts and multidisciplinary actions accurate and expected by all (Guzmán, Galian, & Sterling, 2019).

Autism spectrum disorders (ASD) are a group of conditions characterized by some degree of alteration of social behavior, communication and language, and by a restricted, stereotyped and repetitive repertoire of interests and activities. (WHO, 2019)

Autism spectrum disorder is a neurodevelopmental disorder from the classification determined by the American Association of Psychiatry (AAP, 2013, p. 28), whose symptoms may be in severity level 3 (needs very substantial help), a severity level 2 (needs substantial help), and severity level 1 (needs help) (AAP, 2013, pp. 31-32); comprehensive educational care for learners with this diagnosis requires educators (from all educational backgrounds) who are prepared, with knowledge of the disorder and the principles

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applicable in their pedagogical work, to foster the development of the personality in an increasingly inclusive school and society (García-Gómez, Ambrosio-Bravo & Gil-Díaz, 2020).

Before addressing educational care, it is necessary to refer to special education and inclusive education, since they are based on the principle of standardization and the philosophy of integration, as well as individualization. Above all, the positive consideration of the subject person is emphasized. (Rangel, 2017)

Cuban educators do not give up. There is a professional commitment to continue researching in order to provide an answer to those who receive this diagnosis and to their families, because we live in very human society and the challenge of ensuring optimal living conditions and development of children, adolescents and young people, regardless of their limitations and possibilities, is one that concerns us all.

Taking into account the above, the objective of this article is to review the social inclusion of people with Autism Spectrum Disorders.

## **METHODOLOGY**

An in-depth study of socialized research was conducted, so by making an exhaustive bibliographic analysis on the subject and by searching different sources, a varied and extensive information on this disorder was found. In order to carry out the bibliographic search both at national and international level; there were used important databases from the academic web linked to the main psychopathologies associated to spectrum disorder, focused on social and behavioral communication.

## **MATERIALS AND METHODS**

Theoretical and empirical methods were used to collect, interpret and process information related to the topic. This study allowed the authors to analyze the phenomenon under study, in connection with other facts and phenomena in its constant transformation and development, and supported by different theoretical methods.

The historical-logical method allowed analyzing, evaluating and taking positions in relation to theoretical investigations of the autism spectrum disorder (ASD) and its historical evolution. The analytical-synthetic and the inductive-deductive methods were also used based

on a bibliographic search and experiences in different contexts of the world and in the local context as well.

The hypothetical-deductive method was used through the analysis of the scientific theories related to the object of study, which made the systematization of scientific knowledge possible. In addition, the documentary analysis was used as a fundamental empirical method to characterize the state of social communication and behavior in ASD students during the diagnosis process and the psycho-pedagogical evaluation of the subject of research.

This method facilitated the recording of data about the work developed from the process of psycho-pedagogical evaluation and intervention, through the review of scientific articles, books and sources of the work done by teachers and specialists.

From the perspective of diversity pedagogy, not only are the differences of the learners recognized, but also those of the autism, especially those related to their preparation, which conditions the variety of methods, means and procedures that they employ in terms of education for all. (Espino-Morales & Álvarez-Insua, 2018; Franceschette, 2019).

There is no theoretical consensus on the existence of Special Didactics or for Special Education, but the unique character of Didactics is assumed to be for the attention of school children with special educational needs associated or not with disabilities, within the particularization of the autism-learning process (object of study of General Didactics) for the different spheres of knowledge (Particular Didactics) from the systematization of the use of didactic resources, mediators for the development and enrichment of the autism-learning process for the cognitive, affective and experiential mobilization of schoolchildren with special educational needs, guidance, administration of autism aids, and therefore, adjustment of the educational response; This gives a unique character to the set of transformative and formative actions (decisions and modeling of the autism-learning process) that are assumed in more complex development conditions, in a communicative and interactive climate (Guirado Rivero, García Navarro, & Martín González, 2017)

In this process, different types of training opportunities are offered, and alternative employment and career development and personal projects are discovered. This stage lays the foundations of how the person will develop in different vital areas such as

employment, leisure, continuous training, personal care, social interaction and participation in the community (Walker & Jesien, 2010; Campaña, Romero-Galisteo, Manzanares, & Morales, 2019).

In today's society, it is not enough to care for those children who are most in need. We have to face the challenge of educating "Everyone" to the maximum of his or her abilities. From this perspective, the curriculum constitutes the central element in designing the educational response, a curriculum that places the subject at the center of the autism and learning process from the objectives and content, to provide all students with equal opportunity in their formation (Borges, 2014; Hernández, *et al.*, 2020).

Social inclusion in Cuba, achieved since the birth of a new society in the early days of 1959, brings with it inclusive education, which ensures that the entire population has the right to be educated without any exclusionary reason. The process of dimensioning special education that characterizes the first years of the 21st century makes the special school increasingly a center of help and support and many students with special educational needs share spaces with all children, adolescents and young people with or without disabilities in regular school institutions throughout the country.

The number of students with ASD who attend general education schools is growing, due to their parents' request, proximity and/or distance from specialized institutions, and the criteria for finding a center that provides a quality educational response that is as socializing, inclusive and developmental as possible is paramount. This implies a new challenge for all professionals, whether they are special education graduates or not.

Educational inclusion requires the improvement of the work carried out by autism teachers and professors, to meet the needs of both the schooled population and those who are served on an outpatient basis, and to all without exception. Comprehensive education for students with ASD is a great challenge, and one that a well-educated population like Cuba has high expectations of.

The modalities used are varied: undergraduate preparation that takes place in pedagogical schools and universities, methodological preparation in schools, counseling for teachers who have ASD students in their classrooms, provided by clinical specialists and from the Centers for Diagnosis and Orientation.

The training methods are developed through postgraduate studies such as conferences, courses, diplomas, master's degrees and doctorates. At the same time, it is disseminated through radio, television, and written press, and pamphlets and books are produced with valuable information for educators. However, it is still insufficient.

The evaluation protocol allows learning about the neo-formations and the general state of the child under study. The evaluation involves characteristics of the periodization of the child's psychological development resulting from the activity he or she performs. (González-Moreno, 2018).

There is a growing need for a greater culture on autism, which places in better conditions to apply in a creative way that is already the result of multiple studies by foreign and Cuban researchers, carefully contextualizing them, to avoid trial and error. Educational intervention becomes more complex because there are valuable programs for educational intervention, but it is a serious mistake to try to apply them widely.

The pedagogical work is structured on a group of principles, among them the intensity and long duration of the interventions, cooperative intervention, precocity, the ecological principle, priority to communication and socialization, the principle of multisensoriality, of the use of alternative facilitating systems, individualization of the intervention. The basic principles of the intervention are based on giving an immediate and positive response to all attempts of communication, involving the child in situations of interaction that assume his interests as a starting point and in the continuous use of interaction techniques that are put into practice in daily life and that favour learning, socialization, the adaptation of his or her behavior, social interrelations, knowledge of the environment in children with ASD.

The pedagogical work must be characterized by its systematization, tenacity, and insistence. However, it is not very well fed, which affects significantly the educators who expect changes that demonstrate the effectiveness of their work. This lack of feedback on their efforts frustrates those who are less persevering and is a permanent challenge to their pedagogical skills and abilities since progress is late, learning is slow, hence pedagogical intervention, in addition to being intense, is long-lasting and must last throughout the life cycle (Campos, 2017).

The progress to which one aspires is not achieved if interventions are fleeting, unsystematic, and improvised. This requires careful planning and cooperative intervention by all educational actors, with the family complementing the actions begun in the school. Effective results are not obtained if the school works alone.

Parents are indispensable determining factors in the work autism. Parents cannot and should not be left out under any circumstances. It is necessary to develop in them a sense of full competence so that they may feel that they are the principal actors. This translates into immeasurably positive benefits. And he says that they need to be... "Educated in the fundamentals of autism spectrum disorders and in the particular aspects of their child" (Baña Castro, 2007).

Convinced that, as Vigotski L. S. bequeathed in his transcendental work on psychology and special pedagogy, the earlier the educational attention to students with ASD is initiated, the better results are achieved in such sensitive areas as communication, social interactions and behavior, which constitute the most affected triad (Wing, 1998), always depending on the level of functioning shown by the student. The presence of intellectual disabilities among approximately 75-80% of ASD learners considerably limits success in the autism and learning process.

Early intervention takes advantage of brain plasticity, which allows for better adaptation to the environment, to the changing conditions of the surroundings and its crucial importance in social learning is valued (Barrios-Tao, 2016), attributing to it the determining condition in educational processes, in autism and in learning.

The intervention is highly individualized, face to face, in collective environments and small groups with a view to correcting and/or compensating the difficulties it presents on the basis of its possibilities and potential. It is appropriate to state that each student with ASD requires not only an initial study, but also the permanent deepening of his development, his performance, the process of his personality formation, his growing possibilities (García, 2008).

It is interesting to note how this individualized work must be combined with a collective work, so that each ASD learner can "train" his/her possibilities to interact with "others".

The use of alternative facilitating systems that privilege communication, such as visual cues at home,

in the nursery and later in school, is an important element in what is done to minimize internal chaos, the lack of ability to predict what in time and space occurs and prepare for the events they face every day. Well used, respecting the precision-made on its use by its predecessors and in the absence of those of industrial origin, the creative elaboration of pictograms and vignettes, with diverse materials, sometimes discarded by others such as cardboard, cardboard and wood in the collective panels, is an example of this (Gómez, 2018).

The visual keys provide greater autonomy in the environments, help to situate oneself in space and time, allow one to develop independently, anticipate what is going to happen, guide the completion of tasks by pointing out the goals, indicate relevant social events, offer security, reduce anxiety levels and help plan activities.

The autism knows that there are golden rules in communication with children with ASD, in which the tradition is linked to the alternative, with emphasis on those who do not master communication channels, such as: when calling them or asking them to come to the blackboard, three communication channels must be used, almost simultaneously: the oral channel, which is the word, the gestural channel, which is a sign molded with the hands, and the graphic channel, where an image is combined with meaning, materialized in a pictogram with the action that is to be achieved (Gómez, 2005). In the face of the lack of understanding by the learner, he or she must be accompanied by demonstrating what is wanted from him or her, until an appropriate response is achieved. It is combined with a firm and sweet voice, without shouting, with the use of key words, avoiding long speeches that he or she does not understand, using positive language that emphasizes what he or she should do and what he or she should not do, without ambiguity, threats, or reproaches.

Surrounding them with an orderly environment, where each one of their belongings is duly identified, easily accessible, with diverse and carefully elaborated materials taking into account their preferences, guarantees conditions and strengthens the student's stay in the classroom and expands the possibilities of communication (Gómez, 2018).

The use of Benson Schaeffer's method of total communication and signed speech and the Globalized Method in the learning of reading and writing is

occupying an important place in the work of educators. It is exciting to see how learners can read by establishing direct relations between image and word, how they enjoy reading children's stories mounted on a graphic platform of sequences of drawings and pictograms, in the making of which educational assistants, autisms, other children and family members are enrolled.

The use of the Hanen method (PANAACEA, 2019) is also used by our autism, although sometimes it happens that they do not establish a direct relationship between their acts, the name of the method and its use, because its essence is a daily practice in Cuban schools. The ecological principle, which is based on the effectiveness of learning the language in natural environments, is materialized in it, taking advantage of the constant opportunities they offer to develop communication strategies and lasting learning. Autism is often seen autism not only in the classroom, but also in gardens and outdoor areas, in the school garden, the physical education classroom, a park, the beach or other areas of the community. Environmental factors improve the functioning of the brain (Barrios-Tao, 2016), which, together with the emotional states generated by the interaction between education and the environment, favors learning.

Environmental Education, in the training of Special Education specialists, contributes to the formation of children, adolescents and young people with Special Educational Needs, oriented to the mastery of learning and attitudes towards life that allow them to function in natural and social environments and to adapt to them without damaging them and not receiving in return the harmful effects of the environments (Llopiz Guerra, *et al.*, 2020)

It is, therefore, an important demand for educators to recreate interaction with nature, because it is a collective responsibility to fulfill Cuba's strategic objectives related to confronting climate change and caring for and conserving the environment. How much the debate in the cloisters of educational institutions, together with families and community leaders about the learning possibilities of students with this disorder would contribute (Comin, 2014); it is unpredictable how much children can learn and do, if they master simple actions such as not throwing waste into the sea, placing solid waste in the right place on the beaches, planting medicinal plants, vegetables, fruits, vegetables and trees, watering them and taking care of them until they grow up; know what to do in case of heavy rains,

storms or earthquakes; how to avoid the spread of diseases and viruses; how to keep the classroom, schoolyard and house, the city or village where they live, clean and free of possible breeding grounds for disease-transmitting mosquitoes, including *Aedes aegypti*, which transmits dengue fever, Chikungunya, yellow fever and Zika, just to name a few lessons.

This and much more can be learned by autism learners in direct contact with Mother Nature. And educators, without skepticism, must autism it with the use of supports, varied and well-selected resources, which like good children's stories, reinforce learning.

Giving special importance to the family and play as natural environments for learning and development offers constant opportunities that are available to everyone and should not be missed. Turning routine behaviors into potential provides a positive perspective for the development of adaptive skills that educators must learn to employ. Counting utensils when setting the table, organizing shelves, windows, and bookcases, helping to scrub the floor, watering plants, washing dishes and toys, helping with shopping, paying and receiving cashback, giving thanks and being grateful for the help, are valuable everyday actions that learners with autism can take.

Keeping in mind the principle of multisensory is the key in educational actions. Showing natural objects, their replica in plastic, marches paper or other material, their drawing or graphic representation at different levels ranging from the most abstract to the most concrete (Gunter, 2018); offer him the opportunity to know and appreciate its texture, weight, color, smell, sound, flavor, to taste it if it is edible, allow learn more effectively than using words alone, because all possible analyzers are activated and participate, neuronal networks are strengthened, new ones are created and better learning is guaranteed (Ibarra, 2001). The more stimulation and information, the better, but adequately dosed, with the necessary support according to the particularities of each student.

The integration of all these principles helps the teacher to create spaces and situations that privilege better and greater socialization environment for the students with autism. Socialization can be operationalized in certain axes (Gómez, 2008), social contact, which includes assimilation of social and cultural norms, knowledge about the structure of society and the functions of social institutions.

Another aspect is expressed in the assimilation of habits of the practical activity, fundamentally related to the knowledge of the objects of daily use, the relations of belonging of the objects, the use of each object and the place where they must be kept; and the interiorization of roles to foster the appreciation of the multiple positions and roles that the student assumes, in conditions that are also diverse, leading to preparing him or her for life in a group, respecting social norms of living together, orienting himself or herself in his or her environment, respecting the teacher, sharing with his or her peers, carrying out actions related to survival, organizing and caring for his or her belongings, respecting those of others. The challenge for educators is to integrate all of this information and apply it creatively in the activities they carry out with students.

The current transformations of the third process of Improvement of the National Education System since 2016, which is being applied in a pilot phase in some schools in Cuba, imply an inclusive conception of everything that is managed in the classroom and in the school, considering communication and the participation of all actors as key elements. In this approach, the family is given special importance.

With the family of students with autism, the work is designed according to research by (Gómez, 2008), aimed primarily at guidance, a task that should promote knowledge about autism, a positive attitude towards diagnosis, timely stimulation of the child and openness to integrated intervention.

The teacher must teach the family to participate, a process that is influenced by certain subjective conditions that act as possible barriers, among them: lack of habit of expressing an opinion and asking questions, getting involved in work or addressing the public, time limitations to maintain or expand their social interrelations, tendency to accept the will of others, without reflection; absence or inadequate exercise of leadership, among others.

In the particular case of the family of learners with autism, an obstacle to participation is the pain caused by the child's lack of knowledge of the entity diagnosed, the fear of demonstrating it, of discussing their problems publicly, of admitting that their educational methods are overprotective, and of difficulties in determining the true causes of their daily problems.

The protagonist action of parents is a recurrent theme in many advanced Cuban pedagogical

experiences. When working with the family of children with special educational needs, "the parents themselves, with a participatory approach, should be encouraged to recognize their potential and, in this mobilizing process, to increase their self-esteem" (Gómez, 2008, p. 99).

The teacher must stimulate not only participation, but also cooperation, which must be present in the execution of actions. It is related in this way to the inter and intra-family communication, since, to expose in collective what is thought, to express needs, frustrations, desires, anxieties, to propose solutions and to take decisions, requires cooperation and communication between the members of the family.

In the opinion of Castro (2003), a Cuban authority on family and disability research, "...that what is decisive in the education of children is not so much the standard of living of the family, the profession of the parents or the maintenance of the couple, but the home climate, the emotional care and the communication with the children" (by Gómez, 2008, p. 100)

The family must be made aware of their real needs, their fears, frustrations, desires, successes and errors in the child's education; they must know what are the pressing problems that require an immediate solution for the improvement of their educational work and what are the conditioning factors of these problems; they must recognize that the absence of knowledge about autism creates difficulties in detecting potential and stimulating the child's socialization as a whole.

It is very difficult, but not impossible, to get the family to assume a positive attitude towards the diagnosis of autism. In this respect, it is considered that:

"there are parents who are dedicated to thinking about how unhappy they are, seeking to provoke pity in others ... curse their fate, make their own life a prison and drag their loved ones into that abyss. The most frequent way is to sink into a deep depression, which sometimes ends with the breaking of the family bond" (Garza /sf)

This author, father of a child with autism, states that: "The word autism is not taboo; we must teach society not to feel sorry for them, but ... [to] accept them as they would any other child" (Garza: undated), and his words are a challenge to the culture of diversity, which

allows us to understand and respect the right to be different. It is up to teachers to help the family create a positive environment, to build developmental conditions so that the child with autism grows up healthy and learns all that he or she can learn.

Disseminating the broad spectrum of autism, from the school, promotes actions such as the creation of murals, bulletins, home visits, opening the school to the community so that the family and those who wish and appreciate how the teacher works, opening spaces for reflection among various families to share knowledge and build others; organizing family orientation schools, exchange meetings and advice with clinical specialists, particularly in neurodevelopment, which contribute much to the family, as demonstrated by the experience in Matanzas and Cuba in general.

Multidisciplinary actions occupy an important place in school institutions that educate children, adolescents and young people with AUTISM. The work developed from the University of Matanzas between the years 2012 and 2015, through the Socio-Cultural Project "Light and Hope to Children with Autism", involved numerous entities using zootherapy for the socialization of children with an autism spectrum disorder.

Children and their families, the school entities that educate them, students of the Education, Special Education and Speech Therapy degrees, university professors and society, in general, benefited (Rodríguez & Alfonso, 2017).

The link and the cooperative work of professionals from different disciplines, organizations and sectors, strengthen and allow providing answers to so many questions that are formulated in all social sectors about autism. The socialization of experiences, of Cuban and foreign research results in the most important press and television media of the country and the participation of professionals in scientific events, will undoubtedly contribute to more integrated children, more happy and productive families, more committed professionals who are rewarded with the gift of gratitude and educational success and a greater commitment of all to a more just society, in which the most important thing is man, especially children (Gómez, 2018).

Moving towards unraveling everything about autism and towards an increasingly inclusive school, a school for all, is not a utopia; but it can cease to be so if each

and every one of the educational and social actors, like the traveller of history, continues to research and promote changes towards human improvement, convinced that much remains to be done (Gomez, 2019).

## RESULTS AND DISCUSSION

The results obtained with the application of the aforementioned methods as well as the systematization of research and the search of specialized bibliography on the subject, show that although there is a significant progress in diagnosis, early attention, assessment and psycho-pedagogic intervention, it is necessary to continue exploring in depth from science, because of the importance it has for the education of these children.

For this purpose, it is essential to achieve an adequate professional performance; doctors, psychiatrists, specialists and teachers must receive a preparation that allows them to exercise their educational influence, as they recognize the need revealed in the educational practice, to have early detection of those warning signs that constitute the first manifestations of this disorder. They must also be updated in terms of methods, procedures and means to stimulate development, by being able to guide, demonstrate, advise, help, control, evaluate, design and dose, the pertinent actions during the whole educational process. (Zalaquett, Schönstedt, Angeli, Herrera, & Moyano, 2015)

For this, it is essential to achieve an adequate professional performance through which doctors, psychiatrists, specialists and teachers must receive a preparation that allows them to be able to exercise their educational influence by recognizing the need that today reveals in educational practice, the early detection of the warning signs that constitute the first manifestations of this disorder.

Furthermore, they must be updated in terms of methods, procedures and means to stimulate their development, as they are able to guide, demonstrate, advise, help, control, evaluate, design and dose the pertinent actions during the whole educational process. (Zalaquett, Schönstedt, Angeli, Herrera, & Moyano, 2015)

There is also an analysis about the need to achieve early attention by all specialists who investigate cases, from an intervention that is reflective and scientifically

based, which can be important strategies when working with autistic children.

The existence of different intervention approaches for children with autism suggests the need to reflect on the programs that are designed. It is recommended that programs be designed individually according to the psychological developmental needs of each individual child in order to have a positive impact on his or her life and to promote his or her emotional well-being and that of his or her family. (Aguiar, Hernández, Torres, Valdés, Hernández; 2019)

As strengths of the work done, it is worth mentioning that these investigations are based on reliable, contrasted and rigorous bibliographic sources, with national and international databases. These have been selected with a critical and integral spirit, and from the perspective of the wide possibilities they offer to achieve a social communication and a behavior in accordance with the child's possibilities and the educational influences he or she receives in conditions of inclusion.

It is worth mentioning as a strength of the work carried out, that these investigations are based on reliable, contrasted and rigorous bibliographic sources with national and international databases from which they have been selected with a critical and integral spirit.

There are ample possibilities to offer these children in conditions of inclusion the achievement of a social communication and a behavior in accordance with their possibilities and the educational influences they receive.

However, some weaknesses have been found in the work at the same time; it is worth highlighting the effort to adequately select and manage the wide volume of information consulted, since at certain moments it has been difficult to distinguish what is relevant from what is not significant, especially with regard to what the framework of intervention strategies refers to and the procedure that must be carried out from the methodological work in schools where autistic children are found in conditions of inclusion.

The lack of knowledge and deepening in the teachers and specialists of the diverse theoretical contents and the methodological procedures of the children who are in conditions of inclusion from a more professional perspective, has been a limitation to be

able to design actions in a specific way and with greater personal consistency.

Therefore, the need to have an expert in the subject for the application of pedagogical methods and techniques to achieve a better integration of these schoolchildren in the classroom is consolidated.

## CONCLUSIONS

The theoretical-methodological bases for the attention to diversity and educational inclusion, from a didactic and methodological perspective, allow us to offer the cognitive, procedural and attitudinal tools for the contextualization of Didactics in Special Education.

The preparation of teachers and specialists to know how to face with initiatives the solution of the problems of the pedagogical practice and to integrate to the educational process the scientific and technological advances, is vital for the achievement of an adult and independent life in children, adolescents and young people with special educational needs.

## REFERENCES

- Aguiar, G, Hernández, Y., Torres, Y., Valdés, A., & Hernández, R. (2019). The development of the theory of mind in students with autism spectrum disorder. *Revista de Ciencias Médicas de Pinar del Río*, 23(5), 624-632.
- American Psychiatric Association/AAP (2013). *DSM V Diagnostic Criteria Reference Guide*. Arlington, VA, American Psychiatric Association.
- Baña Castro, M. (2015). The role of the family in quality of life and self-determination for persons with autism spectrum disorder. *Ciencias Psicológicas*, 9(2), 323-336.
- Barrios-Tao, H. (2016). Neurosciences, education and sociocultural environment. *Educación y Educadores*, 19(3). 395-415. <https://doi.org/10.5294/edu.2016.19.3.5>
- Borges, S. (2014). *Educational Inclusion and Special Education: A Unique and Diverse Horizon for Equal Development Opportunities*. La Habana: Sello Educación Cubana.
- Campos, I. (2017). The education of families of children with autism. Paper presented at the International Congress on Pedagogy 2017, Symposium 15: Educational inclusion, a transition to social inclusion. Havana
- Campaña, I. C. J., Romero-Galisteo, R. P., Manzanares, M. T. L., & Morales, N. M. (2019). Evaluation of the quality of service in early intervention: systematic review. *Anales de Pediatría*, 90 (5), 301-309 <https://doi.org/10.1016/j.anpede.2018.04.009>
- Comin, D. (2014). Transforming special education into inclusive education. Recuperado de <https://autismodiario.com/2014/12/03/transformando-la-educacion-especial-en-educacion-inclusiva/>
- Espino-Morales, L., & Álvarez-Insua, M. (2018). Professional development and educational inclusion: a necessary combination to address diversity *Maestro y Sociedad*, 15(1), 18-28.
- Franceschette, C. (2019). The teacher who teaches mathematics in the school inclusion of children with Autism Spectrum Disorder (ASD). In XV Inter-American Conference on Mathematics Education.



- García, M. T. (2008). Autism from the historical-cultural conception. La Habana
- García-Gómez, A., Ambrosio-Bravo, M., & Gil-Díaz, L. (2020). Interventions to improve the play of children with autism on the playground. *Estudios sobre Educación*, 38, 253-278. <https://doi.org/10.15581/004.38.253-278>
- Garza, J. (s/f). Why are our children so sweet? *www.PsicoPedagogía.com*. Retrieved from: <https://www.psicopedagogia.com/hijo-autista>
- Guirado Rivero, V. D. C., García Navarro, X., & Martín González, D. M. (2017). Theoretical-methodological bases for attention to diversity and educational inclusion. *Revista Universidad y Sociedad*, 9(3), 82-88.
- Gómez, I. (2005). An approach to the autistic child. Havana, People and Education
- Gómez, I. (2008). Family education model from a self-development approach for the socialization of the child with autism. Thesis in option to the scientific degree of Doctor in Pedagogical Sciences. Superior Pedagogical Institute "Juan Marinello Vidaurreta", Matanzas.
- Gómez, I. (2018). Educational inclusion of students with autism spectrum disorder. Current challenges. Paper presented at the II International Congress on Neurodevelopment and Early Care (CINAT-2018), Varadero, Matanzas, Cuba.
- Gómez, I. (2019). Research report of the Institutional Project Social Interaction, task The preparation of teachers for the educational inclusion of school children with special educational needs, in Matanzas. University of Matanzas, Cuba
- González-Moreno, C. (2018). Intervention in a child with autism through play. *Revista de la Facultad de Medicina*, 66(3), 365-374. <https://doi.org/10.15446/revfacmed.v66n3.62355>
- Gunter, W. G. (2018). Assessment and levels of representation in children with severe neurological impairment. Conference given at the International Course on Neurodevelopment, Rosa Luxemburg Center for Neurodevelopment, Cárdenas, Matanzas, Cuba (Notes)
- Guzmán, Y. Z., Galiano, J. M., & Sterling, Y. D. (2019). Pedagogical strategy for the educational inclusion of schoolchildren with autism spectrum disorder. *Opuntia Brava*, 11(Especial 1), 155-170. <https://doi.org/10.35195/ob.v11iEspecial.674>
- Hernández, R. M., Llopiz-Guerra, K., Insua, M. A., Fuster-Guillén, D. E., Isla, S. D., Alcoser, A. M. V. H., & Díaz-Flores, F. (2020). Review of the methods and techniques of exploring schools with intellectual talent: the experience of Cuba and Peru. *Psychology and Education*, 57(2), 101-105.
- Ibarra, L. M. (2001). Learn better with cerebral gymnastics. Mexico, Garnik
- Infante, A. (2017). New lights on the "silent epidemic". Technical scientific supplement of *Juventud Rebelde*, December 10. Havana.
- Llopiz Guerra, K., Santos Abreu, I., Marín Llaver, L., Ramos Vera, R., Ramos Vera, M., Tejada Arana, A., Núñez Lira, L., & Alberca Pintado, N. (2020) Environmental education in children with special educational needs. Challenges and perspectives of development. *Propósitos y Representaciones*, 8. <http://dx.doi.org/10.20511/pyr2020.v8n3.448>
- PANAACEA, (2019). The diagnostic process in developmental disorders. Buenos Aires: PANAACEA.
- Rangel, A. (2017). Pedagogical guidelines for the inclusion of children with autism in the regular classroom. A support for the teacher. *Telos*, 19(1), 81-102.
- Rodríguez, Y. & Alfonso, K. (2017). Zootherapy: an educational experience for the socialization of children with autism. Paper presented at the International Congress on Education, Gender and Human Rights, Costa Rica.
- WHO. (2019). Autism spectrum disorders. <https://www.who.int/es/news-room/fact-sheets/detail/autism-spectrum-disorders>
- Walker, D. K., & Jesien, G. (2010). Transition policies: challenges and services for youth with disabilities and chronic health conditions. *Launching Into Adulthood: An Integrated Response to Support Transition of Youth With Chronic Health Conditions and Disabilities*. Baltimore, MD: Brookes, 3-20.
- Wing, L. (1998). Autism in children and adults. A guide for the family. Spain: Paidós.
- Zalaquett, D., Schönstedt, M., Angeli, M., Herrera, C., & Moyano A (2015). Basics of early intervention in children with autism spectrum disorders. *Revista Chilena de Pediatría*, 86(2), 126-131. <https://doi.org/10.1016/j.rchipe.2015.04.025>

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